BRUHAT BANGALORE MAHANAGARA PALIKE

Solid Waste Management EE-3 Division

Allied works for Sweep smart Project& other Repairs Works for DWCC centre in ward no 5

Measurement sheets

1st and Final Bill

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BRUHATH BANGALORE MAHANAGARA PALIKE

Name of Work : - Allied works for Sweep smart Project& other Repairs Works for DWCC centre in ward no 5

Name of Agency :- M/s Venkateshwara Constructions K Lokaraju

Bill No : 1st and Final Bill

MEASUREMENT RECORDED ON:

Sl. No.	Description of work	Side	No.	Length m	Breadth m	Depth m	Quantity	Remark/Unit	
1	Fabricating, supplying & erecting M.S. angular Truss of span upto 10m. The bottom & top member is provided with 50x50x6mm double equal angles, welded back to back and in between top & bottom line, in areas of mid section is provided with 50x50x6mm equal single angle for vertical and inclined members and at supporting ends 40x40x5mm single angle is provided. All the members are welded together with 6mm gusset plate as per Drawing No.CBS/ SD/K-Mantap/9/MND/97. The entire truss is anchored in RCC column by using 4 Nos. of M.S. anchor bolts at each support, with 10mm thick base plate and shoe plate.The work includes cutting, straightening, placing in position of M.S angle and wleding wherever necessary, and applying one coat of red oxide primer coat to all the members including cost of all materials, labour charges, & hire charges of machineries for cutting, welding, grinding & erection equipments, etc., complete as per specification.								
	For Platform		Nos	Length/area		Kg/		SAHPES	Member, L
	ISMB 200	1	15.00	4.00		25.4	1524.00	I	4.00
	ISMB 150X75	1	3.00	12.65		14.9	565.46	I	12.65
		1	9.00	4.10		14.9	549.81	I	4.10
	CHANNEL- SECTION								
	for staircase ISMC 150	2	1.00	4.20		16.4	137.76	C	4.20
		2	1.00	1.25		16.4	41.00	C	1.25
		2	1.00	1.40		16.4	45.92	C	1.40
	Angles for partition								
	ISA 35X35X4mm below th roof	8	4.00	4.10		2.66	348.99	L	4.10
		4	7.00	2.52		2.66	187.69	L	2.52

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Sl. No.	Description of work	Side	No.	Length m	Breadth m	Depth m	Quantity	Remark/Unit	
	ISA 35X35X4mm Above the roof	8	4.00	4.10		2.66	348.99	L	4.10
		4	7.00	2.00		2.66	148.96	L	2.00
	MS Sheet 6mm thick@ 7850kg/m3 12.10X4.10X0.006x7850=2374.9	7850	1	12.15	4.15	0.0060	2374.90		
	MS Gusset plate 320X320X12mmX7850=9.65	7850	24	0.32	0.32	0.0120	231.51		
	steps 1.0mx0.25X4	7850	13	1.000	0.250	0.003	76.54		
	For partition								
	MS sheet 3mm thick @ 7850kg/m3	7850	8	3.000	2.520	0.003	1424.30		
	For Landing								
	MS sheet 3mm thick @ 7850kg/m3	7850	2	1.050	1.200	0.003	59.35		
	MS square tube50mmX50mmX4mm	7850	4.00	4.10	0.200	0.004	102.99	□	4.10
		7850	3.00	12.40	0.200	0.004	233.62	□	4.10
	Ladder			Pm					
	Vertical Members- 100mm dia and 3mm thick	7850	2.00	0.31	2.800	0.003	41.44	○	1.80
	Horizontal Member-50mm dia and 3mm	7850	10.00	0.16	0.600	0.003	22.20	○	1.80
						Total	**8,465.41**	**kgs**	
					Qty Limited to		**8,451.09**	**kgs**	

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Sl. No.	Description of work	Side	No.	Length	Breadth	Depth	Quantity	Remark/Unit
				m	m	m		
2	Providing and fixing M.S. Hand railing for Balcony with 50mm dia. M.S. hollow pipe of 14 gauge, welded to 20mmx20mm M.S. square rod placed vertically, spaced at 100mm at regular intervals of 600mm. These vertical rods laterally tied to 3 horizontal rods spaced at equal interval. These assembly is fixed to concrete by using expansion bolts and welding the same to reinforcement bars and making good the surface. All the joints and sections hould be cut to length, welded and grinded wherever necessary etc., complete . The work includes cost of all materials, labour charges for all items of work, hire charges for welding, cutting and grinding equipment, and electricity charges, etc., complete as per specification and drawing.							
	For Platform		1	16.10		0.90	14.49	
	for staircase		2	4.80		0.90	8.64	
						Total	23.13	Sqm

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MEASUREMENT RECORDED ON:

Sl. No.	Description of work	Side	No.	Length m	Breadth m	Depth m	Quantity	Remark/Unit	
3	KSRB 15-18.2 : Providing and applying enamel metal paint two coats (excluding priming coat) over new steel or other metal surface brushing to give an even shade after cleaning oil, grease, dirt and other foreign matter, including cost of materials, labour, complete as per specifications.								
	Painting For								
	Gate and Grills		2	10.90		5.00	109.00		
						Total	**109.00**	**Sqm**	

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ಸಹಾಯಕ ಎಇಇ/ಎನ್ವಿರಾನ್‌ಮೆಂಟಲ್ ಇಂಜಿ.
ಘನತ್ಯಾಜ್ಯ ನಿರ್ವಹಣೆ
ಬೃಹತ್ ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪಾಲಿಕೆ

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Sl. No.	Description of work	Side	No.	Length	Breadth	Depth	Quantity	Remark/Unit	
				m	m	m			
4	KSRB 15-17.6 : Providing and applying painting two coats (excluding priming coat) on new wood surface and / or wood based surface with enamel paint to give an even shade, cleaning the surface of all dirt, dust and foreign matter, sand papering including cost of materials, labour, complete as per specifications.								
	Painting for Wood Surface								
	Door	2.25	1	0.90		2.10	4.25		
	window	2.25	2	1.20		1.20	6.48		
							Total	**10.73**	**Sqm**

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MEASUREMENT RECORDED ON:

Sl. No.	Description of work	Side	No.	Length m	Breadth m	Depth m	Quantity	Remark/Unit	
5	KSRB 7.11 : Providing and fixing in position aluminium windows and ventilators as per approved drawings with sliding shutters using three track window frame of size 92x31.75mm bottom section 1.3mm thick, weight 1.07kg/m; sides and top sections 1.3 mm, thick, weight 0.933 kg/m.shutter frame section comprising top and bottom section of size 40mmx18mm, wall thickness 1.25mm. weight 0.417 kg./m. shutter side outer 40mmx18mm. wall thickness 1.25mm. weight 0.417 kg/m, shutter interlock section 40mmx26.7mm wall thickness 1.1 mm. thick, weight 0.469 kg/m, the shutters mounted on nylon rollers with approved quality of fixtures such as aluminium handles tower bolts etc.; providing and fixing 5.5mm. thick plain glass for shutters fitted with rubber beading all aluminium sections including cutting to required length, joints mitred subdividing the frame tenonned and rivetted, in the assembled frame, stiffened with end clips for corners, angles etc., and fixed to the walls, lintels, floor beams/cills as the case may be, with necessary steel screws, raul plugs or teak wood gatties including cutting masonry or concrete and making good the original surface using cement mortar. using aluminium section powdered coated to a minimum of 60-70 microns with exterior durable pure polyester grade powder of approved quality.								
	Windows								
			2	2.85		1.50	8.55		
			3	1.50		2.60	11.70		
						Total	**20.25**	**Sqm**	

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Sl. No.	Description of work	Side	No.	Length	Breadth	Depth	Quantity	Remark/Unit	
				m	m	m			
6	Providing and fixing 6mm clear /opal white/Solar/Bronze /blue/green tinted Multi wall poly carbonate sheet for Tubular structure. The work including cost of all materials, labour charges, and hire charges of machineries for cutting, welding, grinding and erection equipments, complete as per specification.								
	Multiwall Poly Carbonate Sheet								
			2	2.80		1.50	8.40		
			3	1.50		2.60	11.70		
						Total	**20.10**	**Sqm**	

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Sl. No.	Description of work	Side	No.	Length	Breadth	Depth	Quantity	Remark/Unit	
				m	m	m			
7	KSRB 4-7 : Providing 2 legged scaffolding for stone masonry work using 10-15 cms. dia best quality casurina poles of 4m over all length (3m +0.5m projection + 0.5m In to the ground), the distance between two rows being 1.25m and spacing of posts being 2m in both rows with 2 horizontal posts with 0.5 mm overlap on either side and braces at 2 m c to c including longitudinal and transveres middle braces to step up and providing platform with casurina poles, forms tied up using coir rope complete as per specifications								
	Scaffolding								
	north and south side		2	15.00		6.00	180.00		
	East and west side		2	15.00		6.00	180.00		
						Total	360.00	Sqm	

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				m	m	m		
8	KSRB 4-1.5 : Providing and laying in position plain cement concrete of mix M20 with OPC cement @ 300kgs, with 20mm and down size graded granite metal coarse aggregates @0.69cum and fine aggregtes @ 0.43cum, with superplastisiser @3lts confirming to IS9103-1999 Reaffirmed-2008, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation, plinth and cills, including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2							
	For flooring		1	15.80	10.35	0.10	16.35	
	Avg thickness(0.12+0.08+0.10)					Total	16.35	Cum

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Sl. No.	Description of work	Side	No.	Length m	Breadth m	Depth m	Quantity	Remark/Unit	
9	Ventilators : Fixed lovers 4'-0" x 3'-0" (1219.2x914.4mm) (Box section) outer frame section size of 33x57mm mullion section.								
	Ventilators		2	0.75		0.60	0.90		
						Total	0.90	Sqm	

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Sl. No.	Description of work	Side	No.	Length m	Breadth m	Depth m	Quantity	Remark/Unit	
10	SOLID PANEL PVC DOOR SHUTTER Providing & fixing 30mm thick factory made rigid foam Panelled Door Shutters made from M.S. tube of 19 gauge thickness, size 19x19mm fro styles and 15x15mm for top & bottom rails, covered with heat moulded PVC channel of 5mm thick sheet & 30 x 50mm wide to form styles & 5mm thick & 75mm wide PVC Sheets for top rail, lock rail & bottom rail on either side & 5mm thick 20mm wide PVC sheet as gap insert for top rail & bottom rail, Panelling of 5mm thick PVC sheet fitted in the M.S. Frame, Sealed to the styles & rails with 5x30mm PVC sheet beading on either side & joined together with solvent cement adhesive etc., Complete as per manufacturers specification & direction of Engineer-in-charge fixed to frames with 3 nos of 75 m.m Aluminium hinges.								
	PVC DOOR								
			2	0.75		2.10	3.15		
						Total	3.15	Sqm	

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Sl. No.	Description of work	Side	No.	Length m	Breadth m	Depth m	Quantity	Remark/Unit	
11	KSRB 11-2 : Providing and fixing white vitreous china clay, water closet Orissa pattern of size 580 x 440mm with integral type footrests, 100mm S or P trap, 10 litre low level, P.V.C flushing cistern (all are approved make) with fittings, C.I / M.S brackets, 32mm diameter flush pipe fittings and clamps, overflow arrangements with special and 25mm mosquito proof coupling of approved design, painting of fittings and brackets, cutting and making good the wall and floor wherever required, including cost of materials, labour complete as per specifications. Specification No. KBS 11.								
	Water Closet								
			2				2.00		
						Total	2.00	Each	

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Sl. No.	Description of work	Side	No.	Length	Breadth	Depth	Quantity	Remark/Unit
				m	m	m		
12	Providing and fixing to wall, ceiling and floor unplasticised PVC 6.00 kgs/sqcm working pressure with pipe fittings, wall clips etc., and making good the wall, ceiling and floor for sanitary pipelines including cost of all materials, labour charges, HOM of acquirements and testing complete as per specifications. - 160mm dia							
	160mm dia pipe for-Sanitary Line		1	9.50			9.50	
						Total	**9.50**	**m**

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13	Providing and fixing Chorinated Poly Venyl Chloride (CPVC) pipes conforming to IS 15778, having thermal stability for hot and cold water supply including all CPVC plain and brass threaded fittings including fixing the pipe with clamp at 1.00 mtr spacing. This includes jointing of pipes and fittings with one step CPVC solvent cement & the cost of cutting chases & making good the same including testing of joints complete. (Concealed work including cutting chases and good the walls etc.) - 25mm nominal OD pipes								
	25mm dia pipe-Water Line								
			1	15.00			15.00		
						Total	**15.00**	**m**	

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				m	m	m			
14	KSRB13-6.1-3 : Providing and fixing in position brass bib cock of approved quality 25mm nominal bore including cost of all materials, labour and HOM of equipments with all leads complete as per specifications.								
	Taps								
			4				4.00		
						Total	4.00	Each	

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